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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/341,401

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NAOFUMI YANAGIHARA

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7590

02/02/2004

FROMMER LAWRENCE & HAUG  
745 FIFTH AVENUE- 10TH FL.  
NEW YORK, NY 10151

EXAMINER

AN, SHAWN S

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/341,401

Applicant(s)

YANAGIHARA ET AL.

Examiner

Shawn S An

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Response to Amendment***

1. As per Applicant's instructions in Paper 10 as filed on 11/10/03, claims 1-4, 7, and 14-19 have been amended.

### ***Response to Remarks***

2. Applicant's arguments filed 11/10/03 with respect to claims 1-8 and 14-19 have been considered but are moot in view of the new ground(s) of rejection using the same references incorporated in the Official action filed 9/5/03.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

4. Claims 1, 14-15, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim (5,737,019).

**Regarding claims 1, 14-15, and 18**, Kim discloses a digital signal conversion device, comprising:

decoding means for decoding (Fig. 6, 100; Fig. 7, 605) a digital signal of a first format (resolution) consisting of orthogonal transform coefficients;

inverse quantization means (130) for inversely quantizing the decoded digital signal;

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resolution conversion means (Fig. 6, DCT converter; Fig. 7, DCT Mapping) for orthogonally transforming respective blocks of the inverse Q decoded signal and for ***extracting/interpolating a predetermined subsets*** of each of the sets of the orthogonal transform coefficients corresponding to each block of the digital signal of a first format (abs), thus producing partial (reduced/interpolated) coefficients representing each of the respective blocks (Fig. 3C; Col. 15, lines 41-52), and ***forming a new coupled block by connecting adjacent blocks represented by the extracted partial orthogonal transform coefficients***, and orthogonally transforming the coupled new block, thus generating a second digital signal of a second format (resolution) consisting of new orthogonal transform coefficients, representing the new coupled block (col. 18, lines 54-67).

**Note:** the Examiner respectfully requests an explanation of the recited ***predetermined subsets*** in the Applicant's disclosure.

quantization means (650) for quantizing the digital signal processed by resolution conversion means including the coupled new block; and

coding means (660) for coding the quantized digital signal for generating a digital signal of second format consisting of new orthogonal transform coefficients, representing new coupled block.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 2-8, 16-17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (5,737,019).

**Regarding claims 2 and 16**, Kim discloses variable length coding (VLC) and VLD. Furthermore, video signal compression scheme being coded at fixed rate or variable rate is well known in the art. Therefore, it would have been obvious for the first format video signal to have a fixed rate and the second format to have a variable rate.

**Regarding claim 3, 7, and 17**, the Examiner takes official notice that reducing low frequency DCT coefficients are well known in the art for a purpose of reducing the resolution. (see patent 5,699,117)(Fig. 27, 1002).

Therefore, it would have been obvious to reduce the number of DCT coefficients of vertical component of a color difference signal to  $\frac{1}{2}$ . Furthermore, reducing DCT coefficients of horizontal and vertical components comprising Y (luminance) and U, V, (chrominance) difference signals are also conventionally well known in the art.

**Regarding claim 4**, it is fundamentally well known for DCT coefficients constituting line of odd and even fields (interlaced format), and subsequently dropping either odd or even fields as a generated output as a method for reducing resolution is well known in the art.

**Regarding claims 5-6 and 8**, Kim discloses having a compressed video signal having a resolution of 1920 X 1040, and converted resolution of 640 X 540 (col. 18, lines 54-67). Therefore, it would have been obvious to a person of skill in the art to simply change resolution sizes so that the compressed video signal has a resolution of 720 X 480, and converted resolution of 360 X 240. Furthermore, it is considered nothing more than a design choice for a ratio of sampling frequency of color difference and luminance signal to be equal to 4:1:1 or 4:2:0 (application specific ratio).

**Regarding claim 19**, Kim discloses eliminating high frequency components when the image resolution is to be reduced. Therefore, it would have been obvious for the conversion means to interpolate the high frequency side of the orthogonal transform coefficients of the first

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format digital signal, since the high frequency coefficients are considered less important, and the high frequency components are generally not visible by human eyes.

*Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

A) Uramoto et al (5,699,117), Moving picture decoding circuit.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn An whose telephone number (703) 305-0099 and schedule are Tuesday through Friday.

SSA  SHAWN S. AN  
PATENT EXAMINER

Primary Patent Examiner

January 25, 2004